

AMENDMENTS TO THE CLAIMS

1. (Original) Apparatus for applying tax stamps onto cigarette packages disposed within different cigarette cartons having different height dimensions, comprising:

a conveyor for serially conveying a plurality of different cigarette cartons having different height dimensions;

means for determining the particular height dimension of each one of the plurality of different cigarette cartons having different height dimensions;

a tax stamp applicator disposed at a cigarette package tax stamp application station; and

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first means for automatically adjusting the elevational disposition of said tax stamp applicator at said cigarette package tax stamp application station in accordance with the height dimension data characteristic of a particular one of the plurality of different cigarette cartons being conveyed to said cigarette package tax stamp application station by said conveyor such that said tax stamp applicator is properly positioned with respect to the particular one of the plurality of different cigarette cartons being conveyed to

said cigarette package tax stamp application station by said conveyor so as to be capable of applying tax stamps to individual cigarette packages of the particular one of the plurality of different cigarette cartons when the particular one of the plurality of different cigarette cartons is disposed at said cigarette package tax stamp application station regardless of the particular height dimension of the particular one of the plurality of different cigarette cartons.

2. (Original) The apparatus as set forth in Claim 1, further comprising:

a programmable logic controller (PLC) operatively connected to said first means for automatically adjusting the elevational disposition of said tax stamp applicator at said cigarette package tax stamp application station;

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a first sensor disposed at a cigarette carton height determination station for detecting the presence of the particular one of the plurality of different cigarette cartons at said cigarette carton height determination station and for transmitting a signal to said programmable logic controller (PLC) indicating the presence of the particular one

of the plurality of different cigarette cartons at said cigarette carton height determination station; and

a second sensor disposed at said cigarette carton height determination station for determining the height dimension of the particular one of the plurality of different cigarette cartons present at said cigarette carton height determination station and for transmitting the height dimension data characteristic of the particular one of the plurality of different cigarette cartons present at said cigarette carton height determination station to said programmable logic controller (PLC) such that said programmable logic controller (PLC) can control said first means for automatically adjusting the elevational disposition of said tax stamp applicator at said cigarette package tax stamp application station whereby said tax stamp applicator will be properly positioned with respect to the particular one of the plurality of different cigarette cartons when the particular one of the plurality of different cigarette cartons is disposed at said cigarette package tax stamp application station.

3. (Original) The apparatus as set forth in Claim 2, further

comprising:

a cigarette carton opening station interposed between said cigarette carton height determination station and said cigarette package tax stamp application station, and comprising means for opening the particular one of the plurality of cigarette cartons so as to expose the cigarette packages contained within the particular one of the plurality of cigarette cartons in preparation for having tax stamps applied to the cigarette packages by said tax stamp applicator disposed at said cigarette package tax stamp application station; and

a cigarette carton closing station disposed downstream of said cigarette package tax stamp application station and comprising means for closing the particular one of the plurality of cigarette cartons after the cigarette packages of the particular one of the plurality of cigarette cartons has had tax stamps applied thereto by said tax stamp applicator disposed at said cigarette package tax stamp application station.

4. (Original) The apparatus as set forth in Claim 3, wherein:

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said means, disposed at said cigarette carton opening station, for opening the particular one of the plurality of cigarette cartons, so as to expose the cigarette packages contained within the particular one of the plurality of cigarette cartons, comprises a pair of doming wheels for engaging side portions of the particular one of the plurality of cigarette cartons and thereby causing upper flap members of the particular one of the plurality of cigarette cartons to be domed upwardly, and a plow member for causing the upper flap members to be unfolded and extended outwardly with respect to each other; and

said means, disposed at said cigarette carton closing station, for closing the particular one of the plurality of cigarette cartons, comprises a glue pot and wheel for applying glue to one of the carton flap members, a pair of flap closers for folding the carton flap members in an overlapped mode with respect to each other, and a pressure plate and roller assembly for retaining the carton flap members in a folded state while the glue applied to the one of the carton flap members sets.

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5. (Original) The apparatus as set forth in Claim 4, further comprising:

second means operatively connected to said programmable logic controller (PLC) for automatically adjusting the elevational disposition of said doming wheels and plow member at said cigarette carton opening station in accordance with the height dimension data characteristic of the particular one of the plurality of different cigarette cartons disposed at said cigarette carton height determination station, as the particular one of the plurality of cigarette cartons is conveyed to said cigarette carton opening station by said conveyor such that said doming wheels and plow member are properly positioned with respect to the particular one of the plurality of different cigarette cartons being conveyed to said cigarette carton opening station by said conveyor so as to be capable of opening the particular one of the plurality of different cigarette cartons when the particular one of the plurality of different cigarette cartons is disposed at said cigarette carton opening station regardless of the particular height dimension of the particular one of the plurality of different cigarette cartons; and

third means operatively connected to said programmable logic controller (PLC) for automatically adjusting the

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elevational disposition of said glue pot and wheel, said pair of flap closers, and said pressure plate and roller assembly at said cigarette carton closing station, in accordance with the height dimension data characteristic of the particular one of the plurality of different cigarette cartons disposed at said cigarette carton height determination station, as the particular one of the plurality of cigarette cartons is conveyed to said cigarette carton closing station by said conveyor such that said glue pot and wheel, said pair of flap closers, and said pressure plate and roller assembly are properly positioned with respect to the particular one of the plurality of different cigarette cartons being conveyed to said cigarette carton closing station by said conveyor so as to be capable of closing the particular one of the plurality of different cigarette cartons when the particular one of the plurality of different cigarette cartons is disposed at said cigarette carton closing station regardless of the particular height dimension of the particular one of the plurality of different cigarette cartons.

6. (Original) The apparatus as set forth in Claim 5, wherein:

said first means for automatically adjusting the elevational disposition of said tax stamp applicator at said cigarette package tax stamp application station, said second means for automatically adjusting the elevational disposition of said doming wheels and plow member at said cigarette carton opening station, and said third means for automatically adjusting the elevational disposition of said glue pot and wheel, said pair of flap closers, and said pressure plate and roller assembly at said cigarette carton closing station, respectively comprise first, second, and third servo drive motors operatively connected to said programmable logic controller (PLC) for respectively receiving the height dimension data characteristic of the particular one of the plurality of different cigarette cartons.

7. (Original) The apparatus as set forth in Claim 3, wherein:

said cigarette carton height determination station, said cigarette carton opening station, said cigarette package tax stamp application station, and said cigarette carton closing station are all equally spaced apart from each other by a first predetermined distance; and

said conveyor for serially conveying the plurality of different cigarette cartons, having different height dimensions, comprises a plurality of pusher members equally spaced apart from each other by a second predetermined distance which is equal to said first predetermined distance comprising the spacing apart of said cigarette carton height determination, said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations such that when a first one of said plurality of pusher members has conveyed a first one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette carton closing station, a second one of said plurality of pusher members has conveyed a second one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette package tax stamp application station, a third one of said plurality of pusher members has conveyed a third one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette carton opening station, and a fourth one of said plurality of pusher members is disposed at said cigarette carton height determination station in preparation for conveying a fourth one of the plurality of different cigarette cartons, having different height dimensions, to said

cigarette carton opening station.

8. (Original) The apparatus as set forth in Claim 1, further comprising:

means for holding a roll of tax stamp paper upon which a predetermined row and column array of tax stamps is disposed;

said tax stamp applicator disposed at said cigarette package tax stamp application station comprises a plurality of longitudinally spaced stamping shoes for engaging predeterminedly spaced ones of the tax stamps disposed in the predetermined array of rows and columns upon the roll of tax stamp paper; and

said tax stamp applicator is linearly longitudinally movable, with respect to said cigarette package tax stamp application station and in predetermined incremental steps, such that said longitudinally spaced stamping shoes can engage predetermined sets of the predeterminedly spaced tax stamps each time said tax stamp applicator is incrementally moved one step whereby a predetermined number of the plurality of different cigarette cartons can have tax stamps from

the rows of tax stamps disposed upon the tax stamp paper applied to their cigarette packages before the tax stamp paper must be advanced so as to present new rows of tax stamps of the row and column array of tax stamps to said stamping shoes of said tax stamp applicator.

Claims 9-15 (Cancelled)

16. (New) Apparatus for applying tax stamps onto cigarette packages disposed within different cigarette cartons having different height dimensions, comprising:

conveyor means for serially conveying a plurality of different cigarette cartons, having different height dimensions, toward a cigarette carton height determination station;

cigarette carton height determination means disposed at said cigarette carton height determination station for determining the particular height dimension of each one of the plurality of different cigarette cartons, having dif-

ferent height dimensions, as each one of the plurality of cigarette cartons is disposed at said cigarette carton height determination station as a result of having been conveyed to said cigarette carton height determination station by said conveyor means;

tax stamp application means disposed at a cigarette package tax stamp application station for applying tax stamps to individual cigarette packages disposed within each one of the plurality of cigarette cartons, having different height dimensions, as each cigarette carton is disposed at said cigarette package tax stamp application station;

cigarette carton opening means, disposed at a cigarette carton opening station, interposed between said cigarette carton height determination station and said cigarette package tax stamp application station, for opening each one of the plurality of cigarette cartons so as to expose the cigarette packages contained within each one of the plurality of cigarette cartons in preparation for having tax stamps applied to the cigarette packages disposed within each opened cigarette carton by said tax stamp application means disposed at said cigarette package tax stamp application station;

cigarette carton closing means, disposed at a cigarette carton closing station disposed downstream of said ci-

garette package tax stamp application station, for closing each one of the plurality of cigarette cartons after the cigarette packages of each one of the plurality of cigarette cartons have had tax stamps applied thereto by said tax stamp application means disposed at said cigarette package tax stamp application station; and

means for automatically adjusting the elevational disposition of said cigarette carton opening means disposed at said cigarette carton opening station, said tax stamp application means disposed at said cigarette package tax stamp application station, and said cigarette carton closing means disposed at said cigarette carton closing station, in accordance with height dimension data respectively characteristic of each one of the plurality of different cigarette cartons, having the different height dimensions, as each one of the plurality of different cigarette cartons, having the different height dimensions, is respectively disposed at each one of said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations wherein said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means will be properly positioned with respect to each one of the plurality of different cigarette cartons, having the differ-

ent height dimensions, disposed at each one of said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations, such that said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means can properly engage each one of the plurality of cigarette cartons, having the different height dimensions, as each one of the cigarette cartons, having the different height dimensions, is respectively disposed at said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations whereby said cigarette carton opening means can properly open each one of the plurality of cigarette cartons, having the different height dimensions, at said cigarette carton opening station, said tax stamp application means can properly apply tax stamps to the cigarette packages disposed within each one of the cigarette cartons, having the different height dimensions, at said cigarette package tax stamp application station, and said cigarette carton closing means can properly close each one of the plurality of cigarette cartons, having the different height dimensions, disposed at said cigarette carton closing station.

17. (New) The apparatus as set forth in Claim 16, further comprising:

a programmable logic controller (PLC) operatively connected to said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means for automatically adjusting the elevational disposition of said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means at said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations;

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a first sensor disposed at said cigarette carton height determination station for detecting the presence of each one of the plurality of different cigarette cartons at said cigarette carton height determination station and for transmitting a signal to said programmable logic controller (PLC) indicating the presence of one of the plurality of different cigarette cartons at said cigarette carton height determination station; and

a second sensor disposed at said cigarette carton height determination station for determining the height dimension of each one of the plurality of different cigarette cartons present at said cigarette carton height determination station and for transmitting the height dimension data char-

acteristic of each one of the plurality of different cigarette cartons present at said cigarette carton height determination station to said programmable logic controller (PLC) such that said programmable logic controller (PLC) can automatically adjust the elevational disposition of said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means at said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations whereby said cigarette carton opening means, said tax stamp application means, and said cigarette carton closing means will be properly positioned with respect to each one of the plurality of different cigarette cartons, having the different height dimensions, when each one of the plurality of different cigarette cartons, having the different height dimensions, is disposed at said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations.

18. (New) The apparatus as set forth in Claim 16, wherein:
said cigarette carton opening means, disposed at

said cigarette carton opening station, for opening each one of the plurality of cigarette cartons, so as to expose the cigarette packages contained within each one of the plurality of cigarette cartons, comprises a pair of doming wheels for engaging side portions of each one of the plurality of cigarette cartons and thereby cause upper flap members of each one of the plurality of cigarette cartons to be domed upwardly, and a plow member for insertion beneath the domed upper flap members so as to cause the upper flap members of each one of the plurality of cigarette cartons to be unfolded and extended outwardly with respect to each other;

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said tax stamp application means disposed at said cigarette package tax stamp application station comprises a stamping iron having a plurality of longitudinally spaced stamping shoes for engaging predeterminedly spaced ones of tax stamps disposed in a predetermined array of rows and columns upon a roll of tax stamp paper; and

said cigarette carton closing means, disposed at said cigarette carton closing station, for closing each one of the plurality of cigarette cartons, comprises a glue pot and a glue applicator wheel for applying glue to one of the upper carton flap members, a pair of flap closers for folding the carton flap members from their unfolded and outwardly ex-

tended positions to folded positions in an overlapped mode with respect to each other, and a pressure plate and roller assembly for retaining the carton flap members in the folded state while the glue applied to the one of the upper carton flap members sets.

19. (New) The apparatus as set forth in Claim 18, wherein:

 said means for automatically adjusting the elevational disposition of said doming wheels and said plow member at said cigarette carton opening station, said means for automatically adjusting the elevational disposition of said stamping iron at said cigarette package tax stamp application station, and said means for automatically adjusting the elevational disposition of said glue pot and applicator wheel, said pair of flap closers, and said pressure plate and roller assembly at said cigarette carton closing station, respectively comprise first, second, and third servo drive motors operatively connected to said programmable logic controller (PLC) for respectively receiving the height dimension data characteristic of each one of the plurality of different cigarette cartons.

20. (New) The apparatus as set forth in Claim 3, wherein:

said cigarette carton height determination station, said cigarette carton opening station, said cigarette package tax stamp application station, and said cigarette carton closing station are all equally spaced apart from each other by means of a first predetermined distance; and

said conveyor for serially conveying the plurality of different cigarette cartons, having different height dimensions, comprises a plurality of pusher members equally spaced apart from each other by means of a second predetermined distance which is equal to said first predetermined distance comprising the spacing apart of said cigarette carton height determination, said cigarette carton opening, said cigarette package tax stamp application, and said cigarette carton closing stations, such that when a first one of said plurality of pusher members has conveyed a first one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette carton closing station, a second one of said plurality of pusher members has conveyed a second one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette package tax stamp application station, a third one of said plurality of pusher members has conveyed a third one of the plurality of

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different cigarette cartons, having different height dimensions, to said cigarette carton opening station, and a fourth one of said plurality of pusher members is disposed at said cigarette carton height determination station in preparation for conveying a fourth one of the plurality of different cigarette cartons, having different height dimensions, to said cigarette carton opening station.

21. (New) The apparatus as set forth in Claim 18, further comprising:

means for holding a roll of tax stamp paper, upon which a predetermined row and column array of tax stamps is disposed, at said cigarette package tax stamp application station; and

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said stamping iron, having said plurality of longitudinally spaced stamping shoes disposed thereon for engaging the predeterminedly spaced ones of tax stamps disposed within the predetermined array of rows and columns upon the roll of tax stamp paper, is linearly longitudinally movable, with respect to said cigarette package tax stamp application station and in predetermined incremental steps, such that said longi-

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tudinally spaced stamping shoes can engage predetermined sets of the predeterminedly spaced tax stamps each time said stamping iron is incrementally moved one step whereby a predetermined number of the plurality of different cigarette cartons can have tax stamps, from the rows of tax stamps disposed upon the tax stamp paper, applied to their cigarette packages before the tax stamp paper must be advanced so as to present new rows of tax stamps of the row and column array of tax stamps to said stamping shoes of said stamping iron.
